

## **Duvvuri Subbarao: Information technology and banking – a continuing agenda**

Keynote address by Dr Duvvuri Subbarao, Governor of the Reserve Bank of India, at the Banking Technology Awards 2008 of the Institute for Development & Research in Banking Technology, Hyderabad, 18 May 2009.

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I am delighted to be here today to celebrate outstanding Information Technology achievements in the Indian banking sector. We are all well aware of the significant contributions that Indian IT professionals have made in the world arena. In fact, when the phrase “Indian talent” is used, it is often meant as a synonym for IT excellence.

### **IT in the Indian financial sector – the beginnings**

The use of technology in expanding banking has been a key focus area of the Reserve Bank. Technological innovation not only enables a broader reach for consumer banking and financial services, but also enhances its capacity for continued and inclusive growth.

There are several factors attributed to India’s high growth in the recent period – improved productivity, growing entrepreneurial spirit, and higher savings, to name the most important. But one factor usually goes unacknowledged – that is financial intermediation. I believe improvement in the quantum and quality of financial intermediation ranks along with other factors that I mentioned above as a key growth driver. And one of the factors that drove the improvement in the quantum and quality of financial intermediation is more wide spread and more efficient use of IT.

Implementing IT in an Indian banking system dominated by government-owned banks has not been easy. In his book “Imagining India – Ideas for the New Century”, Nandan Nilekani makes interesting references to this issue. He writes about his travels around the country in the early 1990s, speaking about the role of, what was then called in typical Indian English as “electronification” in Indian banking. After one such presentation, Nandan writes, the chairman of a bank advised him to stop preaching, warning him that (quote), “The unions will *gherao* you in your house!” (unquote) Nandan goes on to describe another presentation before an incredibly hostile audience, who dismissed out of hand all his ideas and suggestions. But at the end of the presentation, the union leader told him privately that both his sons were working for Microsoft on software solutions. I am told that during the initial days of IT implementation at the Reserve Bank, systems had to be smuggled into the office when “the world was sleeping”. Happily for us, IT implementation no longer faces opposition from any quarter. Indeed, everyone welcomes it. Even the trade unions have become extensive users of technology.

On this occasion, as we honor achievement in technology implementation, I want to share a few thoughts on the role of IT in the Indian financial sector.

### **IT in the Indian financial sector – status today**

First, let me briefly review the current status of IT in the financial sector. More than most other industries, banks and financial institutions rely on gathering, processing, analyzing and providing information in order to meet the needs of customers. Given the importance of information in banking, it is not surprising that banks were among the earliest adopters of automated information processing technology. The visible benefits of IT in day-to-day banking in India are quite well known. There’s “Anywhere Banking” through Core Banking Systems, “Anytime Banking” through new, 24/7/365 delivery channels such as Automated

Teller Machines (ATMs), and Net and Mobile Banking. In addition, IT has enabled the efficient, accurate and timely management of the increased transaction volume that comes with a larger customer base. It has also facilitated the movement from class banking to mass banking.

The past few years saw us marking some major milestones in the Indian payment and settlement systems. The introduction of the Real Time Gross Settlement (RTGS) System has resulted in compliance with the Basle Core Principles for Systemically Important Payment Systems of the Bank for International Settlements. It also has paved the way for risk-free, credit push-based fund transfers settled on a real-time basis and in central bank money. The facility for inter-bank funds settlement through RTGS is today available across more than 55,000 bank branches, in more than 2500 regional centers across the country – a coverage span perhaps not seen anywhere else in the world.

Now, let's compare today's situation with what was in place in 2004, when only 4,800 branches offered RTGS. The rapid acceptance of RTGS by users can be measured by the daily transaction volume: today, we settle close to 100,000 transactions a day in the RTGS mode, up from just about 6000 transactions a day in 2004-05. In fact, quick, safe and efficient electronic movement of funds from virtually any part of the country to any other location is now almost guaranteed. This is enabled by the coordination with the National Electronic Funds transfer (NEFT) System and the National Electronic Clearing Service (NECS). In 2005, RBI was clearing about 2.70 lakh NEFT transactions a month. This number has jumped exponentially to nearly 40 lakh a month today. The establishment of the legal framework for all of this – in the form of the Payment and Settlement Systems Act, 2007 – provides the requisite supportive structure for these systems.

I also want to highlight here the extent of customer migration to electronic payments in India. From less than half a percent of transactions in the electronic mode in 2001, today we process close to about 30 crore transactions per year in the electronic mode. The same holds true for RBI's recent initiative away from High Value Clearing to electronic modes – a move aimed at creating a safer, secure and credit-push based funds transfer route that has gained considerable traction.

We have also seen developments in the communication network and messaging system in India. This institute, the Institute for Development and Research in Banking Technology (IDRBT), set up by the RBI in 1997, implemented the INdianFINancialNETwork – the INFINET – a “one-of-a-kind” initiative for the banking sector aimed at sharing expensive IT resources so as to achieve economies of scale. One of IDRBT's notable achievements has been the implementation of Public Key Infrastructure (PKI) – based electronic data transfer with very high security levels. The Institute also developed a messaging standard called Structured Financial Messaging System (SFMS) with security features superior even to SWIFT. Today INFINET has migrated to the latest MPLS technology in an effort to provide a state-of-the-art network.

IDRBT also set up the National Financial Switch for interconnecting ATMs. It's interesting to note that at the turn of the century, there were only about 4000 ATMs in all of India, and today there are more than ten times this number, and all of them interconnected. These changes have enabled RBI to take two major steps in this area in recent months. First, ATM card holders can use any ATM in the country irrespective of which bank issued them the card; and second, use of ATMs has become free of charge since April 1, 2009. So, now a customer can go to any ATM and withdraw money free of charge regardless of which ATM is being used and which bank issued the card.

IDRBT also spearheaded research in the field of banking technology and has been the centre for excellence in training in this area. Over the years, the role of the institute has extended beyond research to providing various services to the banking community. Now, a committee headed by Dr C Rangarajan is looking into redefining IDRBT's role. Recommendations from this committee are anticipated soon.

Given the growing importance of IT in the banking sector, it is appropriate that the IDRBT provides incentives to the IT-based operations of commercial banks by evaluating their IT capabilities and motivating them to push for improvements by instituting these awards, which are going to be presented today.

### **IT in the Indian financial sector – the continuing agenda**

Information technologies and the innovations they enable are strategic tools for enhancing the value of customer relationship. They reduce the costs of financial transactions, improve the allocation of financial resources, and increase the competitiveness and efficiency of financial institutions.

Even as the achievements of IT in the banking sector are impressive, we have a big agenda on the way forward. Current financial sector leaders still need to take greater advantage of new technologies and information-based systems and expand the coverage of the Indian banking and financial system.

What do I mean by this? For instance, the potential of IT in extending banking services to under-served markets in rural and semi-urban areas is enormous. The use of Smart Card technology, mobile ATMs, coverage of post offices under electronic payments networks in out-of-reach areas – all could play significant roles in providing financial services to more people and thereby serve financial inclusion.

There is tremendous potential for the business growth of financial institutions on the one hand and the inclusive growth of India on the other. We have already seen banks using innovative approaches such as solar power- and mobile technology-based connectivity for branches. A variety of options are available which enable extended reach of such services. I urge banks to identify the technological model that is right for them. We have already seen the positive benefits that come from extending the reach of banking services through pilot projects in Andhra Pradesh and parts of the North East. The Reserve Bank also has announced its intention to expand the reach of banking in the North East even further by funding the cost of connectivity using VSAT technology. IBA is working on the details of this effort.

India is experiencing an explosion in the use of mobile communication technology. And this is a development that the financial sector can exploit. Mobile phone users belong to all strata of society, spread across metropolitan centres, towns and villages. Banks can take advantage of this expanded reach of telecom if they provide services through this medium. The phone's integrated chip can function as a multi-application smart card, thus making banking services available to virtually every mobile phone owner. This holds substantial promise as the delivery vehicle of the future: there is huge potential and an exciting opportunity. However, the expansion of such capabilities must be accompanied by a minimum level of essential security features and continued compliance with established covenants relating to privacy of customer transactions.

The potential of IT for the near future also includes:

- Enabling differentiation in customer service;
- Facilitating Customer Relationship Management (CRM) based on available information, which can be stored and retrieved from data warehouses;
- Improving asset-liability management for banks, which has a direct bearing on the profits of banks;
- Enhancing compliance with anti-money laundering regulations; and
- Complying with Basel II norms

## **Implementation challenges**

New technologies set off a process of change. That, in turn, poses its own set of challenges to institutions as well as to consumers. IT is not yet a very comfortable choice for millions. Therefore, if we are to encourage IT proliferation, we must facilitate a change in customer mindsets and attitudes. Consumer awareness is a major challenge. It must be addressed as a whole. As automation increases and as products come with ever more technology based components, bank customers must understand up front the pros and cons of various products. Banks have to share the responsibility of providing this education. It is not just about the mere listing of all the terms and conditions on the agreement which, if we are being honest, rarely get the attention or focus that they deserve. People should read this information, but do they? Beyond that, people should understand all that is written in technical and legal language, but can they? Real education will lead to breakthroughs in understanding. More consumers would be more eager and willing to move towards use of technologically-enhanced products. In turn, this will act as a multiplier, with a positive impact on bank performance.

Banks also must pass on the benefits of lower costs from technology-based products and services to their customers. I was surprised to note that transfer of funds from one branch of a bank to another, both under the Core Banking System, entailed a service charge for the remitting customer. It does not make sense that the charge for such funds movement within a bank is much more than for inter-bank funds transfers! Let me be candid. The entire institution of banking is built on consumer trust. By imposing charges not commensurate with the cost of services provided, we risk losing this fundamental trust that underlies a banking relationship.

No doubt deployment of IT offers ample rewards. But these rewards can be claimed only by organizations which successfully address the alignment challenge. Alignment of IT and business, alignment of IT and HR and alignment of IT and organizational structure. These are all critical to derive true value. Working in silos deprives several benefits. All this should culminate in IT governance as an important component of corporate governance.

Security in an IT-based transaction processing environment is also critical. Adequate security controls must be in place. This includes the validation of transactions using the maker-checker concept, transmission of electronic messages over a network in encrypted form, due authentication by means of providing for digital signatures and storage of electronic records in conformity with the provisions of the IT Act, 2000 and amendment Act 2008. There is also the human element, and this is an issue as well: studies from around the world show that a significant proportion of IT frauds is the work of insiders. This underscores the need for ensuring that proper controls are in place and that they work properly.

Another serious challenge, particularly for public sector banks, is capacity building and talent retention. The success of IT implementation is ultimately manifested at the counters of the bank or at the ATMs and not in the data centres. If IT implementation in the early stages faced challenges from the trade unions today banks face different kinds of challenges. If a customer is turned back on the last day of tax payment (any facility will not change this habit!) or a cheque gets returned because CBS can not be accessed at the branch, the entire edifice of efficiency collapses in the eyes of the common man! Banks must make sure to avoid such interfaces which erode trust and confidence.

## **Conclusion**

Let me now conclude. We know that investments in newer technologies must be made to modernize existing operations, to face competitive challenges, and to meet customer expectations. Some of these investments will also be made with the goal of achieving cost savings, energy efficiency and environmental friendliness. In the years ahead, the ability of banks to harness new technologies to meet the demands of households and businesses will

be tested. I am confident that banks and other financial institutions will meet these challenges head on, continue to find new and better ways to put technology to their and their customers' best use, and that they will manage the technology and business risks associated with these investments.

The identification and recognition of technology leaders in the form of these Technology Awards underscores our ability to excel in our respective fields. The awards of today are not a culmination; instead they mark another milestone in our journey towards an efficient, effective and, may I add, sensitive and user friendly financial system.

My congratulations to all the award winners today.